Upload Assignment: Assignment 3.1

This assignment is for the student to summarize the theoretical part of this module in a form that can be later inserted in an article. This assignment, then, will be used in next module as part of the corresponding assignment.

The only objective is to summarize the theory using a logic structure from the criterion to the implemented SVM. In next module, the assignment will be corrected to fit all the expectations of the theoretical part of a journal paper, and assessed following the corresponding rubric.

Outline of the assignment

Summarize the theory of this module in a maximum of three pages using the following structure:

1) Explain the concepts of Risk and Empirical Risk.

2) Explain the concepts of complexity and overfitting.

3) Introduce the concept of VC dimension.

4) Enunciate and interpret the VC theorem that describes the bound on the actual risk.

5) Introduce the SVM criteria

6) Develop the analysis that leads to the dual solution of the SVM, and its main results.

7) Describe the properties of the Support Vectors.